

HOST-INITIATED DATA RECONSTRUCTION FOR IMPROVED RAID READ OPERATIONS

ABSTRACT

[25] Method, system and computer program product are provided to improve the reliability of data transfers from RAID systems. Although some read errors may be detected by the RAID controller, other errors may not be; undetected errors may affect the integrity of the data. In accordance with the present invention, the host or client issues a first command to the RAID controller to read specified data. After the RAID controller obtains the data from the RAID drives and transmits it to the host, the host verifies the data to detect any errors. If an error is detected by the host, the host issues a second command to the RAID controller to reconstruct the specified data, rather than merely re-read the data. The reconstructed data is then transmitted to the host. Consequently, previously undetected and uncorrected errors may be detected and corrected by the host.